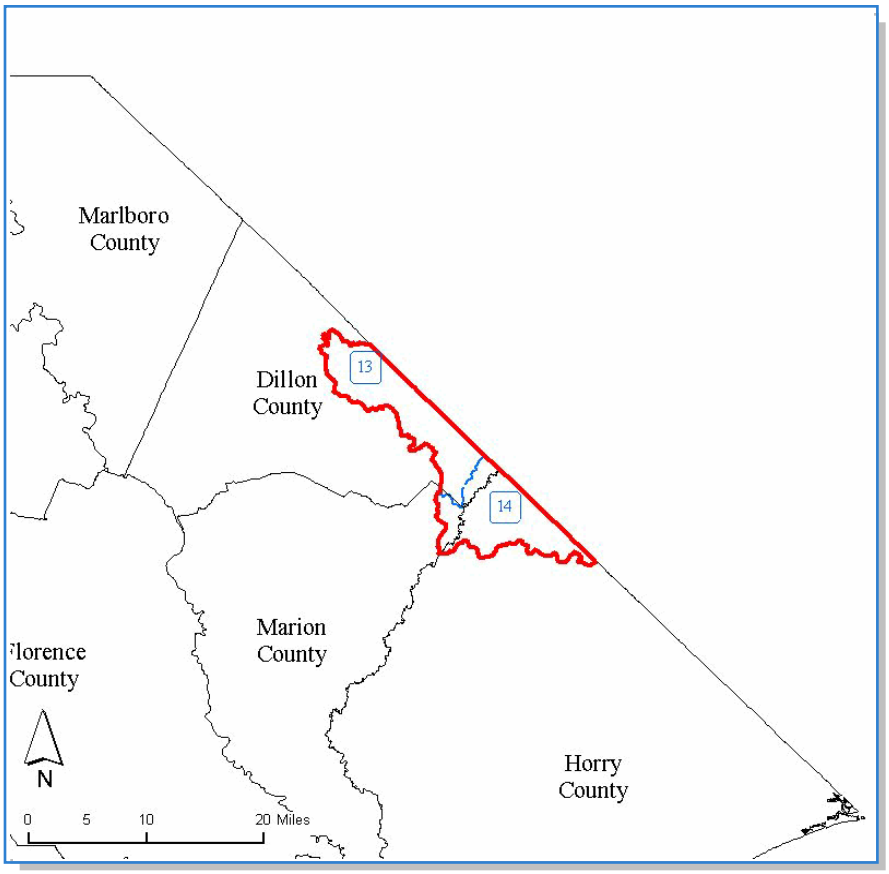
# LUMBER Subbasin

August 31, 2007

## An Assessment of the Lumber Subbasin

Hydrologic Unit Code (8 Digit): 03040203




WATERSHED (10-digit HUC)
(E.g., 01 = 0304020301)

13 Ashpole Swamp

14 Outlet Lumber River

NRCS
Natural Resources
Conservation Service

# EXECUTIVE SUMMARY

## Watershed Description

The Lumber River, also known as the Lumbee River, is located in south-central North Carolina in the flat Coastal Plain. The river's headwaters are known as Drowning Creek, and the waterway known as the Lumber River extends downstream from the Scotland County-Hoke County border to the North Carolina-South Carolina border. Soon after crossing into South Carolina, the Lumber River flows into the Little Pee Dee River. The Lumber River subbasin drains 122 square miles (78,000 ac) in South Carolina.

In South Carolina, the subbasin passes through the Middle Atlantic Coastal Plain (63) and the Southeastern Plains (65) ecoregions (Figure 1). A brief description of the Level III ecoregions in this watershed is available in this document's appendix. A more detailed description of the Level III and Level IV Common Resource Areas (Ecological Regions) is available online (See Griffith *et al.* 2002 in References section.).


FIGURE 1:
LEVEL IV ECOLOGICAL REGIONS

| | | |
|---|---|---|
| | 63h | Carolina Flatwoods |
| | 63n | Mid-Atlantic Floodplains and Low Terraces |
| | 65l | Atlantic Southern Loam Plains |
| | 65p | Southeastern Floodplains and Low Terraces |

# EXECUTIVE SUMMARY

## Land Use/Land Cover

This is a rural subbasin, most similar to the Little Pee Dee. No urban centers exist in this subbasin (Figure 2) but McColl, Dillon and Marion are located in the adjacent Little Pee Dee subbasin. The closest major urban area upstream is Lumberton, NC. The majority of the farmland in the subbasin is cropland (Table 2).

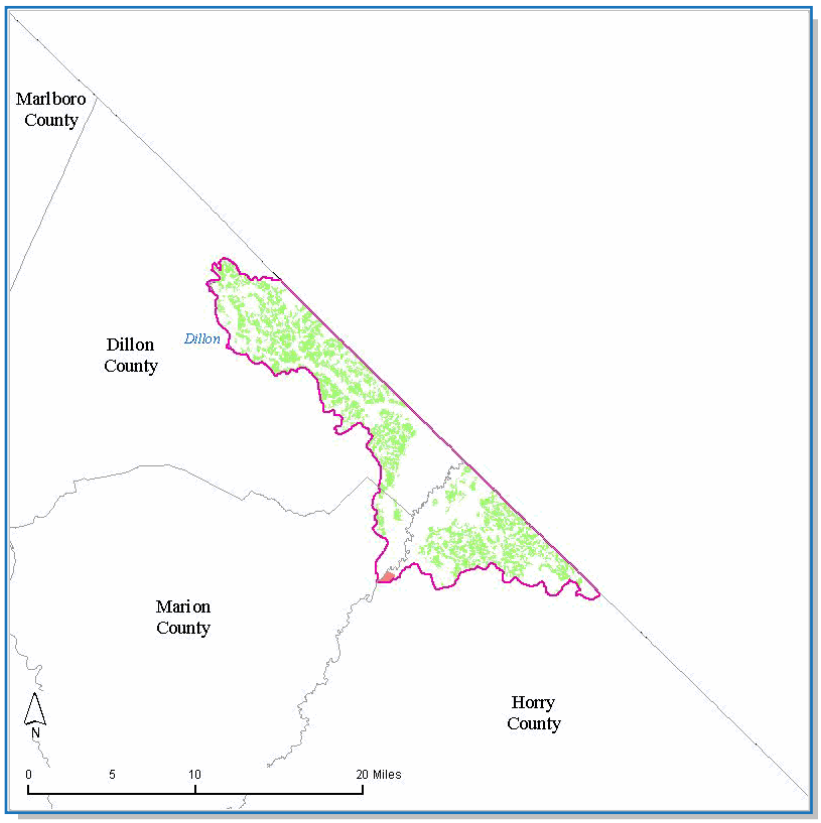



FIGURE 2:
MAJOR LAND USE/LAND COVER CATEGORIES

- FSA Farm Fields
- Urban Areas
- Parks & Land Under Easement
- Other Land

Table 1:
MAJOR LAND USE/LAND COVER CATEGORIES

| | Acres | % of Watershed |
|---|---|---|
| Watershed (Total) | 77,897 | - |
| Urban Area | 122 | 0% |
| Parks/Land Under Easement (not NRCS) | 265 | 0% |
| Farm Service Agency Designated Farm Fields | 241,161 | 310% |

Table 2:
AGRICULTURAL LAND USE: FSA ACREAGE AND ESTIMATED FARM FIELD USE FROM THE 2002 AG CENSUS
(NASS Whole County Data Used. Cropland includes: Field Crops, Orchards, and Specialty Crops.)

| County | FSA Fields (Acres) | % Pasture (Estimated) | % Cropland (Estimated) | % Hayland (Estimated) |
|---|---|---|---|---|
| Dillon | 14,881 | 2% | 96% | 2% |
| Horry | 8,607 | 9% | 87% | 4% |
| Marion | 673 | 6% | 89% | 5% |

# EXECUTIVE SUMMARY

## Summary of Resource Concerns

The following is a summary of resource concerns for the watershed. Each resource concern has a more detailed analysis provided in its corresponding section.

*Soils*
Land capability limitations are dominated by wetness in this subbasin and are typical of an area within the Coastal Plain. Hydric soils or partially hydric soils comprise 72% of the subbasin and are the key resource concerns. Erosion is of moderate concern along upland soils along the Lumber River.

*Water Quantity*
Awaiting SCDNR's 2007 state water assessment.

*Water Quality*
A small number of monitoring stations, but few impairments that can be directly linked to agricultural activities.

*Plant Condition*
The most prominent crops in the subbasin include cotton, corn and wheat for grain, tobacco and soybeans.

*Fish, Wildlife, and Native Plants*
According to SC DNR's "Comprehensive Wildlife Conservation Strategy: 2005 - 2010" (see SCDNR 2005 in References section), the following applies to this subbasin: Biologists have identified habitat protection as one of the most important actions to ensure the protection of South Carolina priority species. Loss and fragmentation of habitat have been identified as a major threat to many of the species listed as threatened and endangered in South Carolina.

*Domestic Animals*
Modest grazing livestock populations. Confined livestock operations are dominated by swine and poultry.

*Economic and Social Factors*
The subbasin is almost unique in the state because that farm sizes and amount of cropland acres actually *increased* between 1997 and 2002.

# EXECUTIVE SUMMARY

## Progress on Conservation

Table 3:
A SUMMARY OF NRCS APPLIED CONSERVATION TREATMENTS (ACRES)
(See Appendix for NRCS Conservation Practices used for Conservation Treatment Categories.)
(Applied practice data is reported on a fiscal year basis commencing on October 1st)

| Conservation Treatments | 2004 | 2005 | 2006 | Total |
|---|---|---|---|---|
| Buffers and Filter Strips | 80 | 17 | 68 | 165 |
| Conservation Tillage | 599 | - | 49 | 648 |
| Erosion Control | 324 | 40 | 128 | 492 |
| Irrigation Water Management | - | - | - | - |
| Nutrient Management | 154 | - | 66 | 220 |
| Pest Management | 151 | - | 66 | 217 |
| Prescribed Grazing | 30 | 19 | - | 49 |
| Trees and Shrubs | 238 | - | 110 | 348 |
| Wetlands | - | - | - | - |
| Wildlife Habitat | 55 | 40 | 143 | 238 |

Table 4:
LANDS REMOVED FROM PRODUCTION BY FARM BILL PROGRAMS (WHOLE COUNTY DATA SHOWN)

| County | Conservation Reserve Program (ac) 2005 | Conservation Reserve Program (ac) 1986 - 2005 | Grassland Reserve Program (ac) 2005 | Farmland & Ranch Protection Program (ac) 2005 | Wetland Reserve Program (ac) 2005 |
|---|---|---|---|---|---|
| Dillon | 2,998 | 31,665 | - | 57 | 410 |
| Horry | 7,060 | 51,256 | - | 752 | 1,582 |
| Marion | 1,727 | 14,178 | - | 1,074 | 2,844 |

Table 5:
APPROVED TOTAL MAXIMUM DAILY LOAD (TMDL)
(See SCDHEC 2007 (a) in Reference Section.) - SCDHEC Contact: Matt Carswell - (803) 898-3609

| TMDL Document | Numberof Stations | Parameter of Concern | Status | WQMS ID Standard Attained |
|---|---|---|---|---|
| - | - | - | - | - |

Table 6:
OTHER PLANS, ASSESSMENTS, AND PROJECTS IN THE WATERSHED

| Organization | Description | Contact | Telephone |
|---|---|---|---|
| SCDHEC | Watershed Water Quality Assessment: Pee Dee River Basin (2000) | Roger Hall | 803-898-4142 |

# EXECUTIVE SUMMARY

## Other Watershed Considerations

# RESOURCE CONCERNS

## Soils

A majority (68%) of land in this Coastal Plain subbasin has limitations due to wetness (Table 7). Much of the wetness is associated with hydric soils in riparian areas throughout the subbasin and upland flats in the eastern most part of the subbasin (Figure 5). Droughtiness is a major concern is about 15% of the area (Table 7) and occurs mostly in the sandy soils on stream terraces in Marion County and in the Sand Hills area in Dillon County (Figure 1). Low soil organic matter in these sandy soils is a soil health concern. Erosion is a resource concern in only a narrow band of sloping upland soils that border the Lumber River (Figures 1 and 4). Only 4% of the land is classified as potentially highly erodible (Table 9). Over 60% of the land in the Lumber subbasin is either prime farmland (30%) or statewide important farmland (30%) and occurs throughout the subbasin except in the area where the Marion, Horry, and Dillon counties join (Figure 3, Table 8).

Table 7:
LAND CAPABILITY CLASSES (See NRCS 2007 [a] and [b] in References section.)

Percentages are based on the whole watershed (77,897 ac).

| Land Capability Class 1 | Acres | Percent |
|---|---|---|
| 1 - Slight limitations | 7,840 | 10% |

| | % Land by Subclass Limitation | | | | | |
|---|---|---|---|---|---|---|
| | Erosion (e) | | Wetness(w) | | Droughtiness (s) | |
| Land Capability Classes 2-8 | Acres | Percent | Acres | Percent | Acres | Percent |
| 2 - Moderate limitations | 3,274 | 4% | 12,948 | 17% | 6,098 | 8% |
| 3 - Severe limitations | 309 | 0% | 16,277 | 21% | 3,244 | 4% |
| 4 - Very severe limitations | 137 | 0% | 8,677 | 11% | 2,667 | 3% |
| 5 - No erosion hazard, but other limitations | - | - | 1,812 | 2% | - | - |
| 6 - Severe limitations; unsuitable for cultivation; limited to pasture, range, forest | - | - | 3,933 | 5% | 317 | 0% |
| 7 - Very severe limitations; unsuitable for cultivation; limited to grazing; forest, wildlife habitat | - | - | 8,509 | 11% | - | - |
| 8 - Miscellaneous areas; limited to recreation, wildlife habitat, water supply | - | - | 451 | 1% | - | - |

# RESOURCE CONCERNS

## Prime Farmland

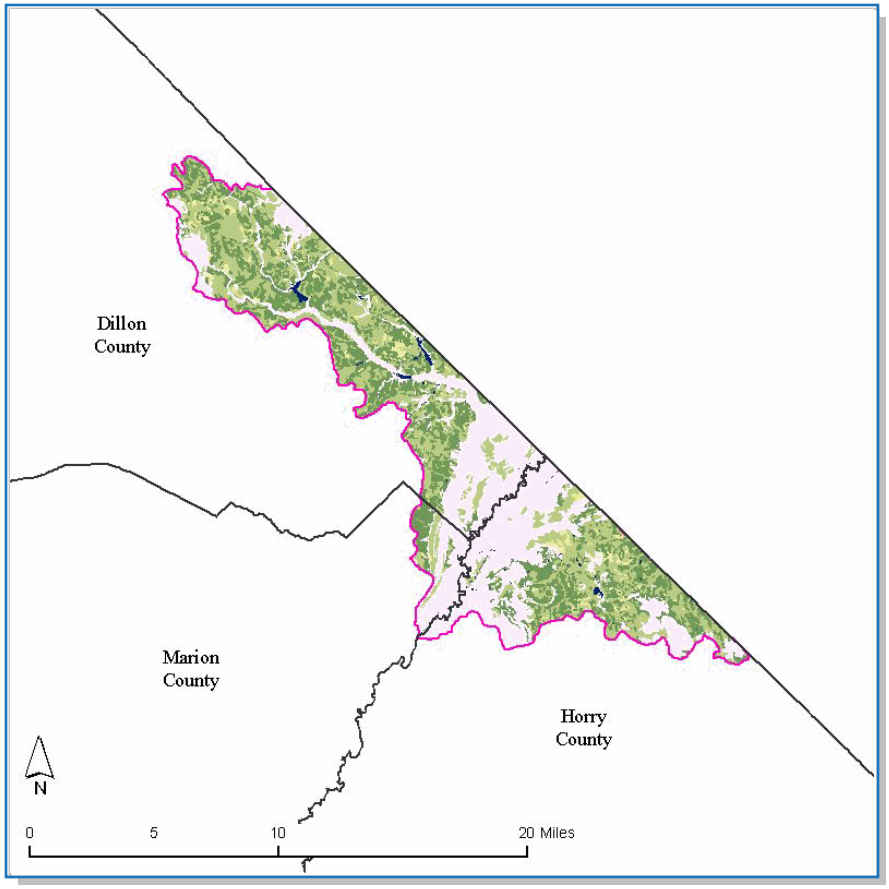



FIGURE 3:
PRIME FARMLAND
(See NRCS 2007 [a] and [b] in References section.)

Table 8:
PRIME FARMLAND

| Prime Farmland Categories | Acres | Percent of Land |
|---|---|---|
| All areas are prime farmland | 21,207 | 27% |
| Farmland of statewide importance | 23,562 | 30% |
| Not prime farmland | 30,415 | 39% |
| Prime farmland if drained | 2,455 | 3% |
| Prime farmland if drained and either protected from flooding or not frequently flooded during the growing season | 0 | 0% |
| Prime farmland if irrigated | 0 | 0% |
| Prime farmland if irrigated and drained | 0 | 0% |
| Prime farmland if protected from flooding or not frequently flooded during the growing season | 0 | 0% |

# RESOURCE CONCERNS

## Highly Erodible Land

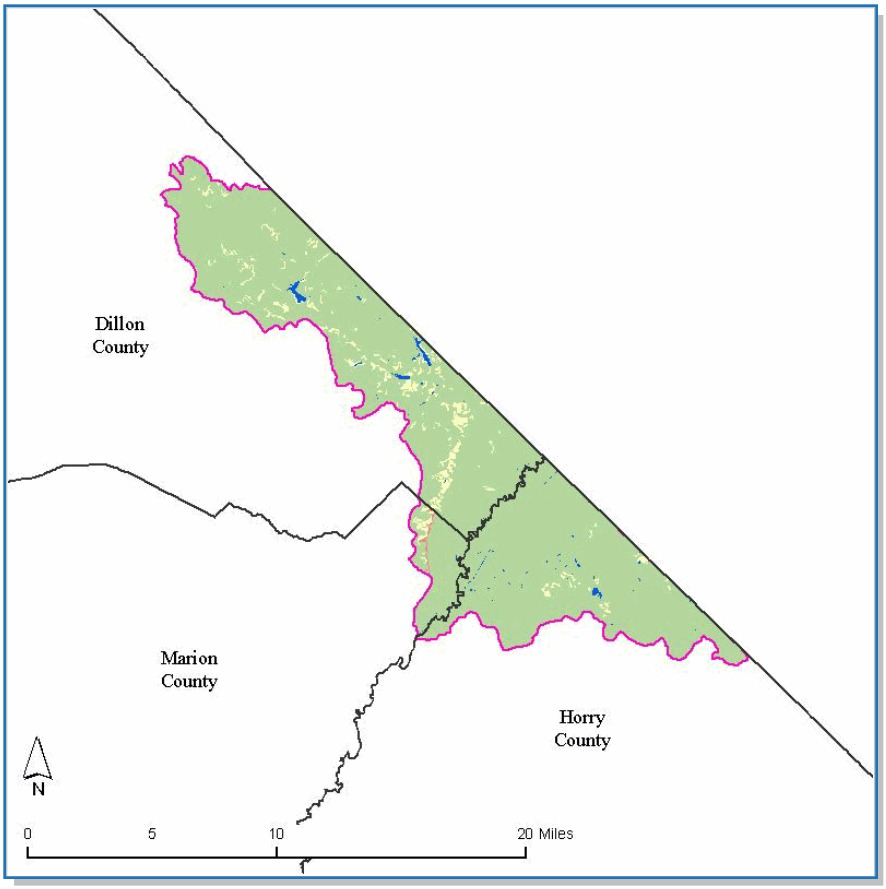



FIGURE 4:
HIGHLY ERODIBLE LAND
(See NRCS 2007 [a] and [b] in References section.)

Table 9:
HIGHLY ERODIBLE LAND

| Highly Erodible Land Categories | Acres | Percent of Watershed |
|---|---|---|
| Highly erodible land | 123 | 0% |
| Not highly erodible land | 73,518 | 94% |
| Potentially highly erodible land | 3,158 | 4% |

# RESOURCE CONCERNS

## Hydric Soils

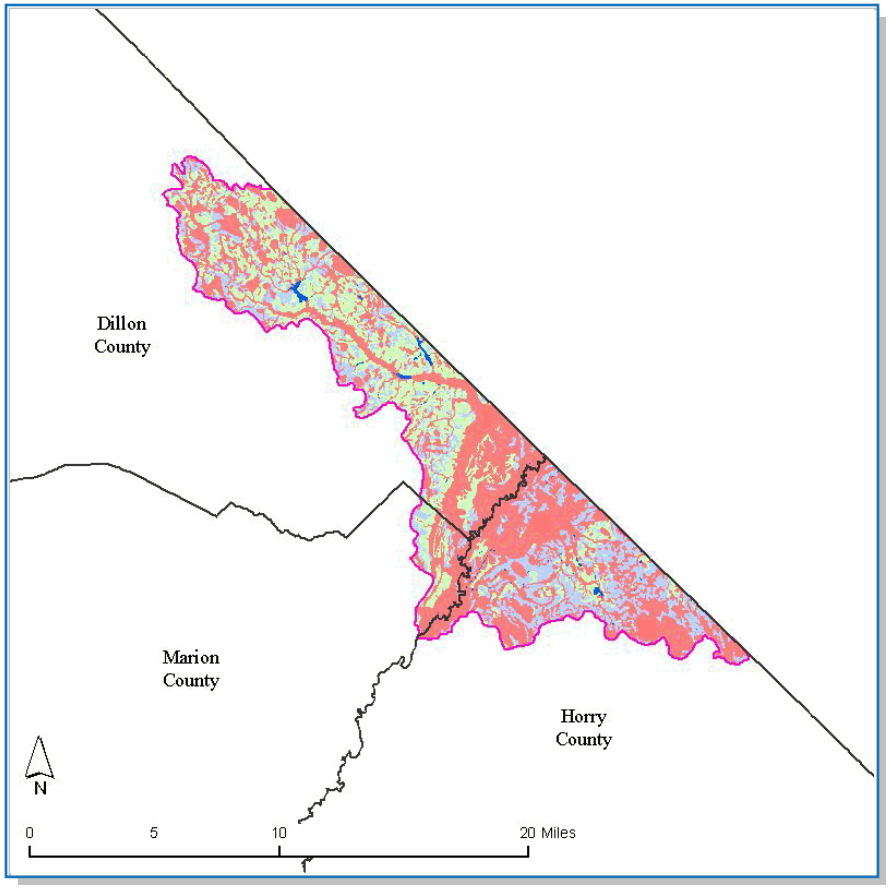



FIGURE 5:
HYDRIC SOILS
(See NRCS 2007 [a] and [b] in References section.)

Table 10:
HYDRIC SOILS

| Hydric Soils Categories | Acres | Percent of Watershed |
|---|---|---|
| All Hydric | 39,000 | 50% |
| Not Hydric | 21,407 | 27% |
| Partially Hydric | 17,232 | 22% |

# RESOURCE CONCERNS

## Water Quantity

Narrative awaiting SCDNR's new state water assessment.

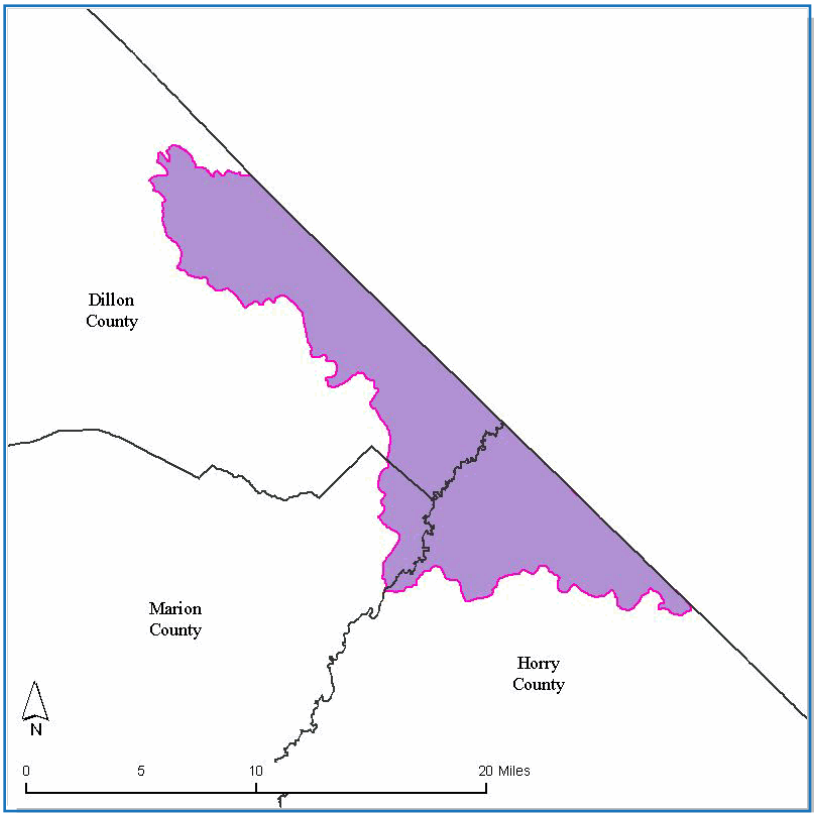



FIGURE 6:
WATERSHED RELATIVE TO CAPACITY USE AREAS, NOTICE OF INTENT AREAS, AND CONES OF DEPRESSION

Table 11:
CAPACITY USE, NOTICE OF INTENT, AND CONES OF DEPRESSION AREA IN WATERSHED
(See SCDHEC 2007 [c] and SCDNR 2004 in Refrerences Section.)

| Area | Percent of Watershed |
|---|---|
| % Watershed in Cone of Depression and Capacity Use (CU) Area | 0% |
| % Watershed in SCDHEC Capacity Use (CU) Area | 100% |
| % Watershed in SCDHEC Notice of Intent (NOI) Area | 0% |

# RESOURCE CONCERNS

## Water Quantity Cont.

Table 12:
INDICATORS OF IRRIGATION WATER USAGE (WHOLE COUNTY DATA ARE USED)
(See NASS 2002 and SCDNR 2004 in References Section)

| County | Total Irrigated Water Used MGD | Total NASS Cropland (ac) | Cropland Under Irrigation (ac) | Percent Cropland Under Irrigation | Water Use Gal/Ac/Day for Irrigated Land |
|---|---|---|---|---|---|
| Dillon | 1.80 | 90,048 | 1,928 | 2.1 | 934 |
| Horry | 3.14 | 101,336 | 741 | 0.7 | 4,238 |
| Marion | 1.90 | 57,783 | 575 | 1.0 | 3,304 |

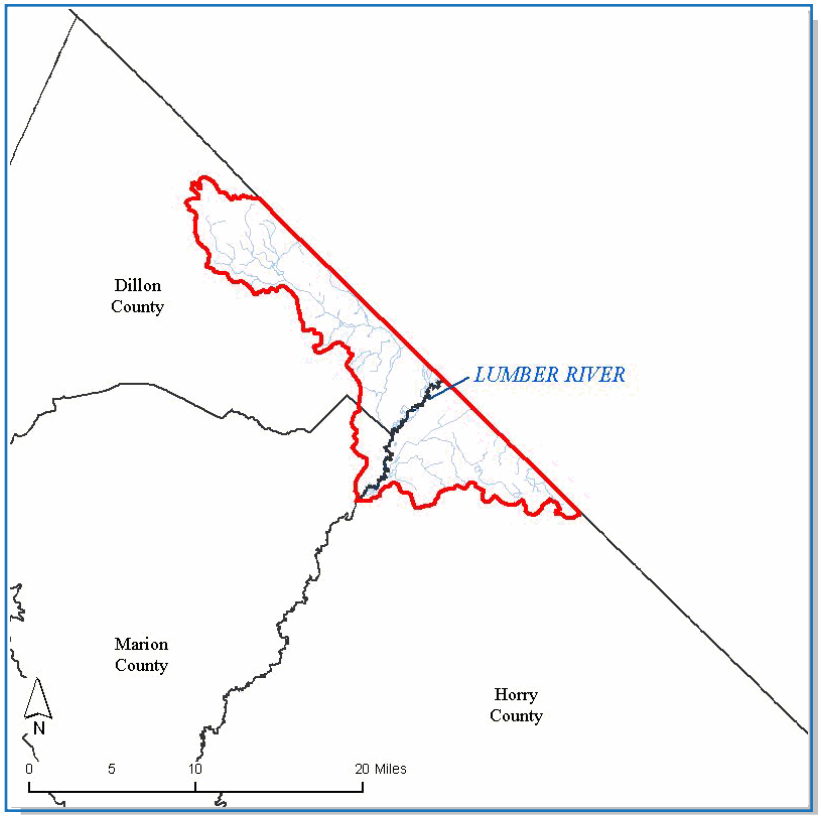



FIGURE 7:
NRCS ASSISTED FLOOD CONTROL STRUCTURES IN WATERSHED

Flood Control Structure
Main River
Hydrography

Table 13:
NRCS IMPLEMENTED FLOOD CONTROL STRUCTURES

| Number of Structures (in Watershed) | Maximum Storage (AcFt) | Number of Structures by Hazard Class | | | |
|---|---|---|---|---|---|
| | | High | Low | Significant | Unclassified |
| 0 | - | 0 | 0 | 0 | 0 |

# RESOURCE CONCERNS

## Water Quality

The number of surface water quality impairments is shown in Table 15 resulting in a "303(d)" listing of that Water Quality Monitoring Site (WQMS). Table 5 indicates what progress has been made to address surface water quality through the Total Maximum Daily Load (TMDL) process. Once a TMDL plan is approved, the WQMS is removed from the 303(d) list even though the standard may not have been attained. Note that standards for total nitrogen, total phosphorus, and chlorophyll-a only exist for lakes; therefore, no stream in the state can be listed for any of these three parameters.

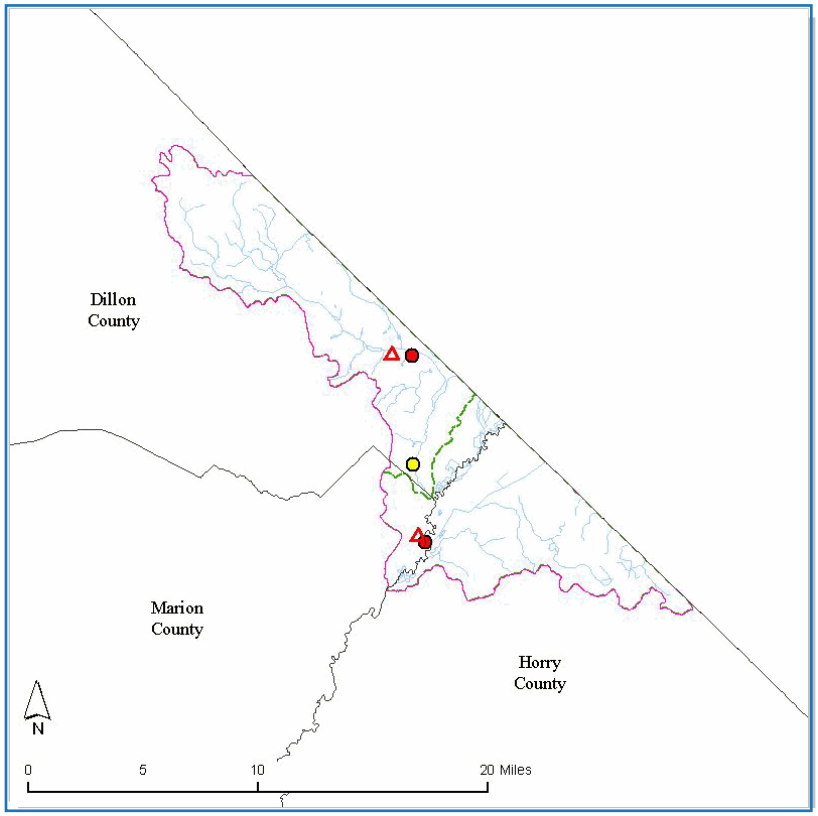



Table 14:
WATER QUALITY MONITORING SITES

| | |
|---|---|
| Permanent Water Quality Monitoring Sites (WQMS) | 3 |
| Random Water Quality Monitoring Sites (WQMS) | 0 |

FIGURE 8:
PERMANENT WATER QUALITY MONITORING SITES

- WQMS (No Impairment)
- WQMS (303d Listed)
- WQMS (Approved TMDL)
- Waste Water Treatment Plant
- Hydrography
- Hydrologic Unit Code 10 Boundary

Table 15:
NUMBER OF MONITORING SITES SHOWING SURFACE WATER QUALITY IMPAIRMENTS
(See SCDHEC 2006 in References for the state 303(d) list.)

Recreational Use Standard

| Parameter | Impairments |
|---|---|
| Fecal Coliform | |

Fish Tissue Standard

| Parameter | Impairments |
|---|---|
| Mercury | 2 |
| PCB's | 0 |

Shellfish Harvest Standard

| Parameter | Impairments |
|---|---|
| Fecal Coliform | NA |

Aquatic Life Use Standard

| Parameter | Impairments | Parameter | Impairments | Parameter | Impairments |
|---|---|---|---|---|---|
| Biological | 0 | Dissolved Oxygen | 1 | Total Phosphorus | 0 |
| Chlorophyll A | 0 | Ammonia Nitrogen | 0 | pH | 0 |
| Chromium | 0 | Nickel | 0 | Turbidity | 0 |
| Copper | 0 | Total Nitrogen | 0 | Zinc | 0 |

# RESOURCE CONCERNS

## Plant Condition

***Plants of Economic Importance***

Plants of economic importance are shown in Table 16. The crops shown in this table are from NASS data where the top five crops, by acres, in each county are displayed. The timber statistics (see Clemson Extension Forest Services 2003 in References) indicate the relative importance of the timber industry within the state and the importance of the timber industry compared to agriculture within the county.

The most prominent crops in the subbasin include cotton, corn and wheat for grain, tobacco and soybeans.

***Native Plant Species***

According to SC DNR's "Comprehensive Wildlife Conservation Strategy: 2005 - 2010" (see SCDNR 2005 in References section), the following applies to this subbasin: in the river bottoms on the coastal plains, one frequently finds hardwood-dominated woodlands with moist soils that are usually associated with major river floodplains and creeks. Characteristic trees include: sweetgum (*Liquidambar styraciflua*), loblolly pine (*Pinus taeda*), water oak (*Quercus nigra*), willow oak (*Quercus phellos*), laurel oak (*Quercus laurifolia*), cherrybark oak (*Quercus pagoda*) and American holly (*Ilex opaca*).

The Cypress-tupelo swamp subtype occurs on lower elevation sites as seasonally flooded swamps. It is usually transected by tannic-acid rivers and creeks and contains oxbow lakes and pools. Dominant trees are bald cypress (*Taxodium distichium*) and water tupelo (*Nyssa aquatica*), swamp gum (*Nyssa biflora*), Carolina ash (*Fraxinus caroliniana*), water elm (*Planera aquatica*) and red maple (*Acer rubrum*).

Another common feature in this subbasin is the Carolina Bay. Carolina bays are isolated wetlands in natural shallow depressions that are largely fed by rain and shallow groundwater. These bays have an elliptical shape and generally a northwest to southeast orientation. Carolina bays vary but tend to host many different plant and animal species.

Table 16:
WHOLE COUNTY DATA OF PLANTS OF ECONOMIC IMPORTANCE IN SUBBASIN
(See: USDA NASS 2002 & Clemson University Forest Extension Services 2003 in References section)

| Plant | Counties |
|---|---|
| All Cotton | Dillon, Marion |
| All Wheat for grain | Marion, Horry, Dillon |
| Corn for grain | Dillon, Marion, Horry |
| Forage - land used for all hay and haylage, grass silage, and greenchop | Horry |
| Soybeans | Dillon, Horry, Marion |
| Tobacco | Marion, Horry, Dillon |
| Timber, Top 10 Rank in SC | Marion |
| Timber Revenues Exceed Ag. Revenues | Marion |

# RESOURCE CONCERNS

Table 17:
FEDERALLY LISTED THREATENED AND ENDANGERED PLANT SPECIES IN WATERSHED
(See USFW 2006 in References section.)

| Common Name | Latin Name | Status |
|---|---|---|
| Pondberry | *Lindera melissifolia* | Endangered |
| Canby's dropwort | *Oxypolis canbyi* | Endangered |
| Sea-beach amaranth | *Amaranthus pumilus* | Threatened |
| Chaff-seed | *Schwalbea americana* | Endangered |

# RESOURCE CONCERNS

## Fish and Wildlife

For additional information, the SC Department of Natural Resources has completed a "Comprehensive Wildlife Conservation Strategy: 2005 - 2010" (see SCDNR 2005 in References section).

In 2005, mercury advisories were issued for 57 water bodies in South Carolina. Higher concentrations of mercury in fish tissue tend to occur in the Coastal Plain of South Carolina with relatively lower concentrations (and therefore fewer advisories) in the Piedmont. For more details on fish advisories, please refer to the SCDHEC fish advisory website at: **http://www.scdhec.gov/environment/water/fish/**

Table 18:
FEDERALLY LISTED THREATENED AND ENDANGERED WILDLIFE SPECIES IN WATERSHED
(See USFW 2006 in References section.)

| Common Name | Latin Name | Status |
|---|---|---|
| Wood stork | *Mycteria americana* | Endangered |
| Red-cockaded woodpecker | *Picoides borealis* | Endangered |
| Kirtland's Warbler | *Dendroica kirtlandii* | Endangered |

Table 19:
FEDERALLY LISTED THREATENED AND ENDANGERED AQUATIC SPECIES IN WATERSHED
(See USFW 2006 in References section.)

| Common Name | Latin Name | Status |
|---|---|---|
| Shortnose sturgeon | *Acipenser brevirostrum* | Endangered |

# ECONOMIC & SOCIAL FACTORS

## Domestic Animals

Grazing livestock populations are modest (Table 20). Confined livestock operations are dominated by swine and poultry (Figure 9, Table 21).

Table 20:
WHOLE COUNTY GRAZING ANIMAL POPULATION DATA FROM 2002 AG. CENSUS
(See NASS 2002 in References section. "D" in table = "Cannot be disclosed".)

| County | Cows/Calves | Grazing/Forage (ac) | County Rank in State |
|---|---|---|---|
| Dillon | 1,526 | 1,373 | 43 |
| Horry | 8,425 | 8,996 | 23 |
| Marion | 5,243 | 3,628 | 26 |

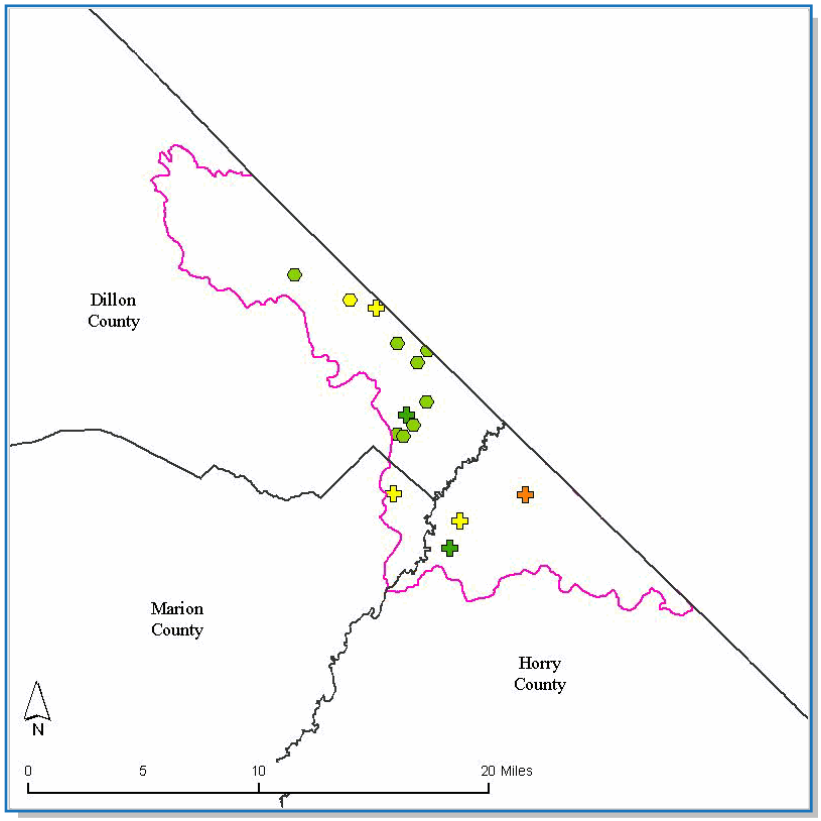
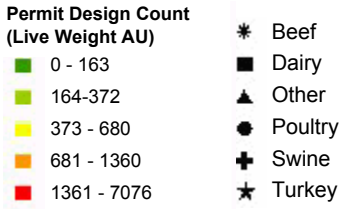



Table 21:
CONFINED ANIMAL POPULATION [As given by SCDHEC] (Au = Animal Unit = 1,000 lbs)

| | |
|---|---|
| Beef Live Weight (Au) | - |
| Dariy Live Weight (Au) | - |
| Horse Live Weight (Au) | - |
| Poultry Live Weight (Au) | 2,761 |
| Swine Live Weight (Au) | 2,739 |
| Turkey Live Weight (Au) | - |

FIGURE 9:
TYPE AND SIZE OF CONFINED ANIMAL OPERATION




* Weighted averages are estimated based on agricultural land use area.

# REFERENCES

The number of full-time farmers is *higher* than the state average of 47% and farm sizes are *larger* than the state average of 197 ac (Table 22); both parameters suggest *above* average levels of participation in conservation programs. The subbasin is unique in the state in that farm sizes and amount of cropland acres actually *increased* between 1997 and 2002; this is compared to average farm size reductions of 13% and average cropland losses of 8% across the state.

The relative importance of crop and livestock commodity groups in the watershed is shown in Tables 24 and 25; a *qualitative* indication of the relative importance of timber is provided on Table 16.

For more economic and farm information from the 2002 Agricultural Census, more detailed reports for all South Carolina counties can be found at:
**http://www.nass.usda.gov/census/census02/profiles/sc/index.htm**

Table 22:
2002 FARM CENSUS DATA (WHOLE COUNTY DATA SHOWN) (SC average farm size = 197 ac)

| County | Total Number of Farms | % Full Time Farmers | % Farms > 180 (ac) | Average Farm Size (ac) |
|---|---|---|---|---|
| Dillon | 197 | 70% | 50% | 570 |
| Horry | 988 | 54% | 24% | 191 |
| Marion | 213 | 60% | 36% | 438 |
| **Weighted Avg*** | **484** | **65%** | **41%** | **435** |

Table 23:
2002 FARM CENSUS ECONOMIC DATA (WHOLE COUNTY DATA SHOWN) (Results in $1,000)

| County | Market Value of Ag Products Sold | Market Value of Crops Sold | Market Value of Livestock, Poultry, and Their Products | Farms with sales < $10,000 |
|---|---|---|---|---|
| Dillon | 69,247 | 22,793 | 46,454 | 81 |
| Horry | 54,451 | 38,571 | 15,880 | 677 |
| Marion | 24,157 | 16,352 | 7,804 | 141 |
| **Weighted Avg*** | **63,260** | **28,508** | **34,752** | **298** |

Table 24:
VALUE OF CROP COMMODITY GROUPS - COUNTY RANK IN STATE
(See NASS 2002 in References section. "D" in table = "Cannot be disclosed".)

| County | Value of All Crops | Grains & Oilseeds | Tobacco | All Cotton | Vegetables & Melons | Fruits, Nuts, & Berries | Nursery, Etc. | Christmas Trees & Woody Crops | Hay & other Crops |
|---|---|---|---|---|---|---|---|---|---|
| Dillon | 9 | 3 | 4 | 2 | (D) | (D) | 42 | - | 42 |
| Horry | 3 | 5 | 1 | (D) | 11 | 14 | 25 | (D) | 26 |
| Marion | 13 | 13 | 3 | 12 | 31 | 38 | 40 | - | 36 |

# REFERENCES

Table 25:
VALUE OF LIVESTOCK AND POULTRY COMMODITY GROUPS - RANK IN STATE
(See NASS 2002 in References section. "D" in table = "Cannot be disclosed".)

| County | Value of Livestock, poultry | Poultry, Eggs | Cattle & Calves | Milk & Dairy | Hogs & Pigs | Sheep & Goats | Horses, etc. |
|---|---|---|---|---|---|---|---|
| Dillon | 7 | 12 | 43 | - | 1 | (D) | (D) |
| Horry | 19 | 24 | 23 | (D) | 2 | 10 | 11 |
| Marion | 26 | 23 | 26 | - | 12 | (D) | (D) |

# APPENDIX

Clemson University Extension Forest Service. 2001. *Cash Receipts from Timber Harvests - 2001 Ag and Timber Comparison.*. Compiled by A. Harper. Available at:
**http://www.clemson.edu/extfor/forest_data/**

Griffith, G.E., Omernik, J.M., Comstock, J.A., Schafale, M.P., McNab, W.H., Lenat, D.R., MacPherson, T.F., Glover, J.B., and Shelburne, V.B., 2002, Ecoregions of North Carolina and South Carolina, (color poster with map, descriptive text, summary tables, and photographs): Reston, Virginia, U.S. Geological Survey (map scale 1:1,500,000). Available at:
**http://www.epa.gov/wed/pages/ecoregions/ncsc_eco.htm**

National Resource Inventory (NRI) 1997. Estimates of water erosion from Cropland by 8-digit HUC. Available at:
**http://www.nrcs.usda.gov/technical/land/erosion.html**

NatureServe 2006. Distribution of native fish species by watershed. NatureServe. Available at:
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**http://www.scdhec.gov/environment/water/docs/06_303d.pdf**

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# APPENDIX

### Level III Common Resource Area (Ecological Region) Descriptions

**Middle Atlantic Coastal Plain** (63)

The Middle Atlantic Coastal consists of low elevation, flat plains, with many swamps, marshes, and estuaries. Forest cover in the region, once dominated by longleaf pine in the Carolinas, is now mostly loblolly and some shortleaf pine, with patches of oak, gum, and cypress near major streams. Pine plantations for pulpwood and lumber are typical, with some areas of cropland. In South Carolina, the Middle Atlantic Coastal Plain is divided into three level IV ecoregions Carolinian Barrier Islands and Coastal Marshes (63g), Carolina Flatwoods (63h), Mid-Atlantic Floodplains and Low Terraces (63n).

**Southeastern Plains** (65)

The Southeastern Plains are irregular with broad interstream areas have a mosaic of cropland, pasture, woodland, and forest. In the past centuries, human activities (logging, agriculture and fire suppression) removed almost all of the longleaf pine forests. Elevations and relief are greater than in the Southern Coastal Plain (75), but generally less than in much of the Piedmont (45). The ecoregion has been divided into three level IV ecoregions within South Carolina: Sand Hills (65c), Atlantic Southern Loam Plains (65l), and Southeastern Floodplains and Low Terraces (65p). Note: The Atlantic Southern Loam Plains (65l) is a major agricultural zone, with deep, well-drained soils, and is characterized by high percentages of cropland.

### NRCS Conservation Practices used for Conservation Treatment Categories in Table 3

| Report Category | Practice Codes |
|---|---|
| Buffer and Filter Strips | 332, 391, 393, 412 |
| Conservation Tillage | 324, 329, 329A, 329B, 344, 484 |
| Erosion Control | 327, 328, 330, 340, 342, 561, 585, 586 |
| Irrigation Water Management | 441, 449 |
| Nutrient Management | 590 |
| Pest Management | 595 |
| Prescribed Grazing | 528, 528A |
| Trees and Shrubs | 490, 612, 655, 656, 66 |
| Wetlands | 657, 658, 659 |
| Wildlife Habitat | 644, 645 |

# APPENDIX

### Hydrologic Unit Numbering System

In 2005, the NRCS in cooperation with the U.S. Geological Survey, the South Carolina Department of Health and Environmental Control, and the U.S. Forest Service updated the South Carolina part of the USGS standard hydrologic unit map series. The report, "Development of a 10- and 12- Digit Hydrologic Unit Code Numbering System for South Carolina, 2005", describes and defines those efforts. The following is from the Abstract contained in that report: "A hydrologic unit map showing the subbasins, watersheds, and subwatersheds of South Carolina was developed to represent 8-, 10-, and 12-digit hydrologic unit codes, respectively. The 10- and 12-digit hydrologic unit codes replace the 11- and 14-digit hydrologic unit codes developed in a previous investigation. Additionally, substantial changes were made to the 8-digit subbasins in the South Carolina Coastal Plain. These modifications include the creation of four new subbasins and the renumbering of existing subbasins." The report may be obtained at **http://www.sc.nrcs.usda.gov/technical/HUC_report.pdf**. See Table 2 in the report for a cross-reference of old to new 8-digit HUC.

This subbasin profile uses the new HUC 8 numbering system with its modified and newly created subbasins. The NRCS reports implemented practices by 8-digit Hydrologic Unit Code. All NRCS reported Conservation Practices were reported using the older numbering system. 2005 and 2006 data were converted to the new HUC 8 numbering system through the Latitude and Longitude data reported with the applied practice. The use of these differing numbering systems has resulted in some NRCS implemented practices being credited in this report to an 8-digit HUC as reported by the NRCS but not correctly credited in the new numbering system. Likewise, the newly created 8-digit HUC will not be credited with the 2004 applied practices.